Peter Henry

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Objective

Seeking an information technology internship/co-op position to gain experience in applied computer science, system analysis/administration, or application development.

Education

California Institute of Technology, Pasadena, CA
Pursuing B.S. degree in Computer Science
Class of 2016

Technical Skills

Python	JavaScript	CentOS	Git	English
Java	PHP	Ubuntu	LaTeX	French
SQL	IA32 / ARM7	Debian	Vim	MS Office
C/C++	Scheme	Windows	Mathematica	Adobe CS
HTML/CSS	Haskell	OSX	VirtualBox	

Projects

whsales.peterhenry.net. Summer 2015 (active).
- Rewrite/update of existing website used by "Eve Online" players to publically post wormhole sale listings
- Adds significantly more granular order sorting/searching capability and more accurate input validation
- Interfaces with the Eve Online API and certain third-party crowdsourced datasets not distributed officially
- Backend is Python/Django and SQLite3; frontend is HTML/CSS, Javascript/jQuery and Bootstrap

github.com/mosbasik/moviepicker. Summer 2015 (active).
- Webapp designed to answer the question "What should we watch tonight?"
- Users select an arbitrarily large set of movies that they are personally interested in watching
- Aggregates of users' movie selections are used to figure out movies that arbitrary user groups want to watch
- Interfaces with the IMDB dataset via the OmniDB API
- Backend is Python/Django and SQLite3; front-end in HTML/CSS, Javascript/jQuery and Bootstrap

github.com/mosbasik/rvagaming. Summer 2012 to Summer 2014 (project on temporary hiatus).
- Website to track small group of gamers
- Database of users, account handles and alternate accounts powered by Facebook and Steam public APIs
- Database of all matches played by users powered by Python's Beautiful Soup web scraping library
- Static reference pages (client settings, common issues, console tweaks, game guides, and other content)
- Back-end written in Python, PHP, and MySQL; front-end in HTML/CSS and JavaScript/jQuery

Work Experience

Ricketts Information Management Systems & Services Representative. Summer 2013 to Summer 2015.
- Configure, secure, and maintain CentOS server belonging to a Caltech undergraduate residence
- Maintain house network, machines and printers
- Provide computer/network assistance to house members

Ricketts Vice President. February 2014 to February 2015.
- Housing assignments coordinator for a Caltech undergraduate residence
- Liaison between administrative staff and undergraduates
- House events and logistics manager (inventory, purchasing, cleanup)

IT Intern for The Seed Company. Summer 2012.
Migrate local/overseas email accounts and data to new servers
Generate and maintained rosters for work prioritization
Contact employees to schedule migration dates
Document problems/unusual cases and wrote fix tutorials for company wiki
Specialize in Mac/Unix migrations
Securely wipe and reconfigure used machines for resale

Media Team Member for Covenant Church Colleyville. Summer 2011 to present.
Maintain internally consistent and easily searchable persistent media database
Coordinate with presenters regarding new material they intend to show
Provide the audience with undistracting high-quality audio and visuals

Job Coordinator for Rift Valley Academy Class of '11 "Senior Store" Fundraising Program. 2010-2011.
Maintain database of work-eligible students by coordinating with class sponsors, coaches, and teachers
Ensure that all students worked reasonable, non-overlapping hours
Track work histories to assign under-performing workers better fitting jobs
Generate and distribute accurate work rosters to student managers and class sponsors
Enforce disciplinary measures where appropriate, and tracked offenses for future reference

Coursework/Miniprojects

CS/CNS/EE 156a and 156b - Learning Systems (Python, C++). 2014.
Work on the "Netflix Prize" machine learning problem

CS/EE 144 - The Ideas Behind Our Networked World (Python). 2013.
PageRank calculation of large graphs using Amazon Elastic MapReduce

CS 115 - Functional Programming (Haskell). 2012.
"Sudoku" solver
S-expression and XML parsers

CS 24 - Introduction to Computing Systems (C, IA32). 2012.
Explicit heap memory allocator/deallocator
Cache simulator, and cache-optimized matrix transpose function
System-level multithreading scheduler with timer interrupts for greedy threads
Virtual pagefile and memory system using a number of page replacement policies
Proof-of-concept virtual-kernel root exploit

CS 4 - Fundamentals of Computer Programming (Scheme/Racket). 2011.
Differential equation solver using higher-order functions

CS 2 - Introduction to Programming Methods (Java, Python, C++). 2011.
"Reversi" heuristic AI